EXPEDIENT



Shotgun AMMO

HOMEMADE

If old grandpa left you his old 12 gauge, or you want to shoot that old pistol you came across while cleaning the attic (and don't have any ammo!) what do you do? If you can't buy ammo, or even primers and re-loading presses from a store, what do you do??
You will need to start from scratch!
Expedient Homemade Ammo **provides all the information you need to make simple and effective ammo.**
At the end of the day, you don't need 'Presses & Primers' to construct you own simple improvised ammo using just a few simple tools!



P. A. Luty

IMPROVISED HOMEMADE 12 GAUGE SHELLS

If, for whatever reason, you cannot buy your 12g shells from a store, you may need to construct your own improvised 12g ammunition.
The following document illustrates how 12g shells can be easily and quickly constructed with just a few simple tools and components.

Products required

1. 25mm MDPE pipe stiffeners.
2. 15mm wood dowel.
3. 15mm plumbing olives.
4. 8mm rubber nut caps.
5. Hot glue gun.
6. Shot - (Lead or BB's)
7. Black powder.
8. .38 blank cartridge.



The main body of the shell is a simple MDPE pipe stiffener available from any good trade-plumbing outlet. The ones pictured below are used for common blue 25mm MDPE water pipe. The stiffener (from here on referred to as the shell) **is 20.3mm in diameter. The shells inside diameter is 17mm. Pipe stiffeners do vary slightly in dimension from maker to maker so the manufacturing techniques illustrated here are based on the pipe stiffeners I used in the writing of this document. Any 25mm pipe stiffener may be used, but they may require slightly more trimming.**



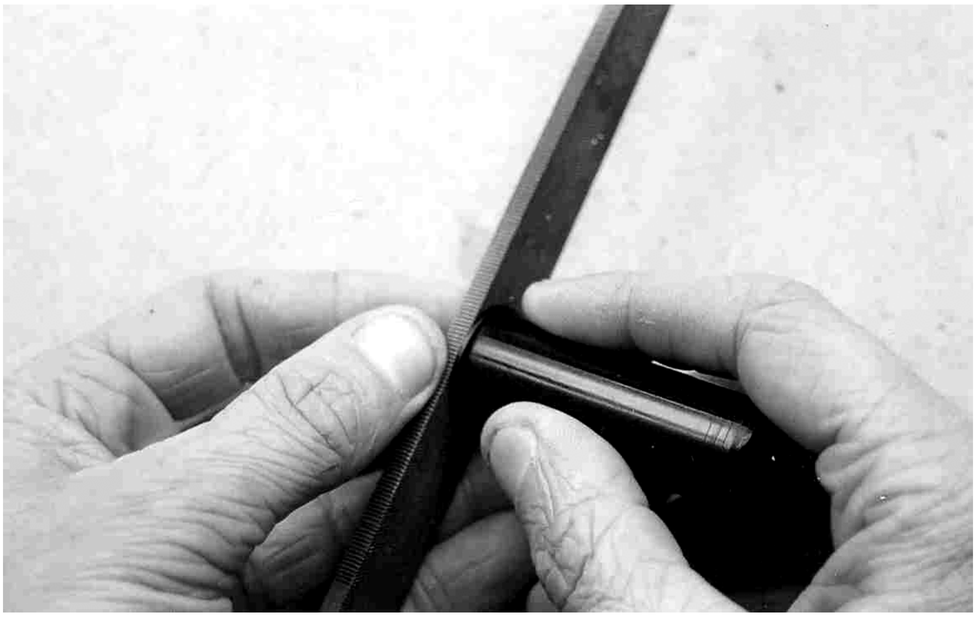
Common 25mm pipe stiffeners.



A 25mm pipe stiffener shown alongside a standard 12g shell.

TRIMMING THE SHELL

The first step is to reduce the rim of the shell to a thickness of 1.5mm (or thereabouts) using a flat file. The shell is passed 'back and forth' over the file until the rim is the correct thickness. This is a quick and simple procedure. During the trimming procedure rotate the shell a quarter turn every few 'passes' to ensure the rim is evenly reduced.



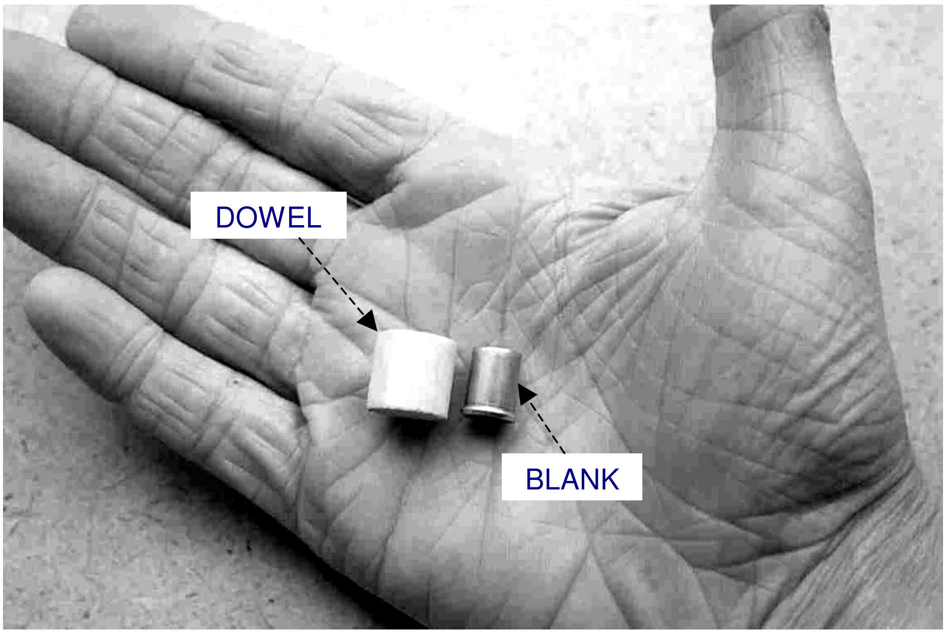
Reducing the rim.



Checking the rim thickness. It should be 1-1.5mm

PRIMING THE SHELL

The next step is to prime the shell. For this we require a .38 blank cartridge and a 13mm length of 15mm diameter wood dowel.
The crimp of the blank is removed with a file. *Note:* **If the blank is loaded with black powder, the powder should be saved for later use.**



Empty .38 blank and wood dowel section.



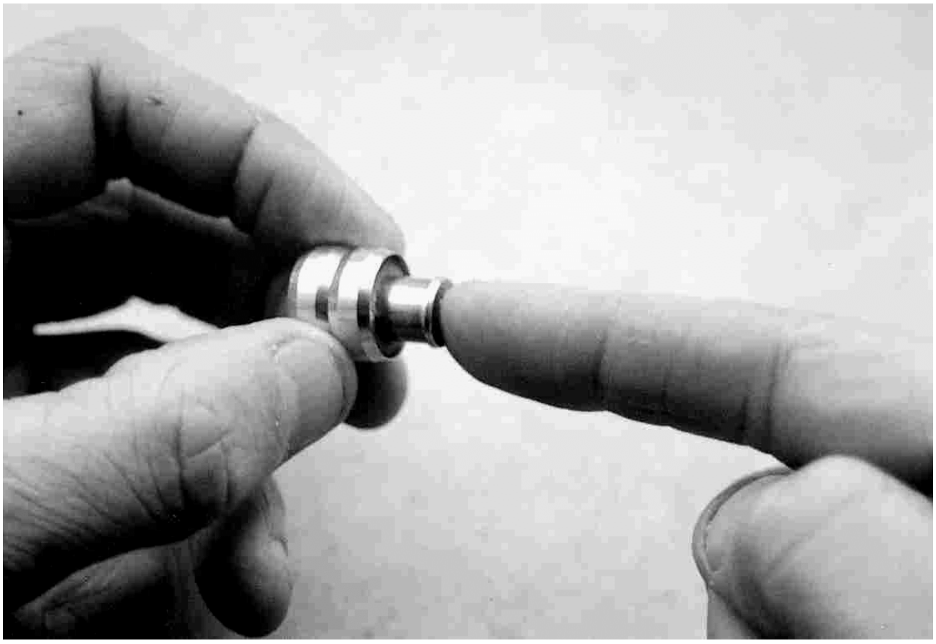
Fit the olives.

The next step is to drill a 3/8" (9.5mm) hole through the center of the dowel section and fit the two brass/copper 15mm plumbing olives.
After drilling the 3/8" hole coat the outside of the dowel with high strength retainer such as 'bearing fit' and slide the olives over the

wood dowel. Now leave the assembly for a few minutes for the adhesive to harden. The blank can now be inserted into the dowel assembly and glued in place with retainer.



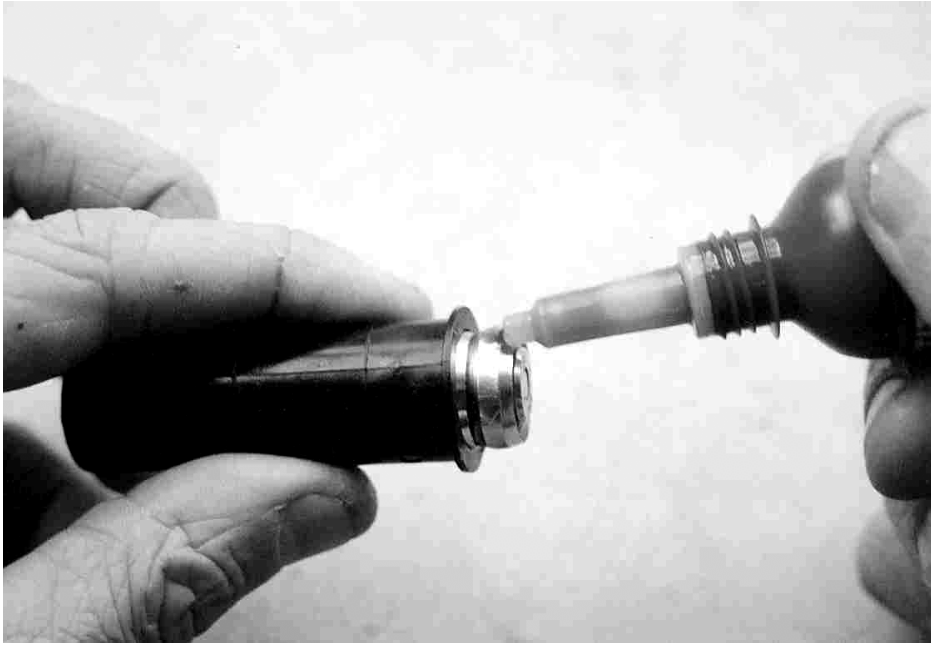
Blank and dowel assembly.



Push the blank home.

The blank must be glued in place using a high strength retainer but ensure no adhesive enters the mouth of the blank. Remove any excess retainer with a tissue after the blank is seated.

The blank cartridge assembly can now be inserted into the shell and glued in place.



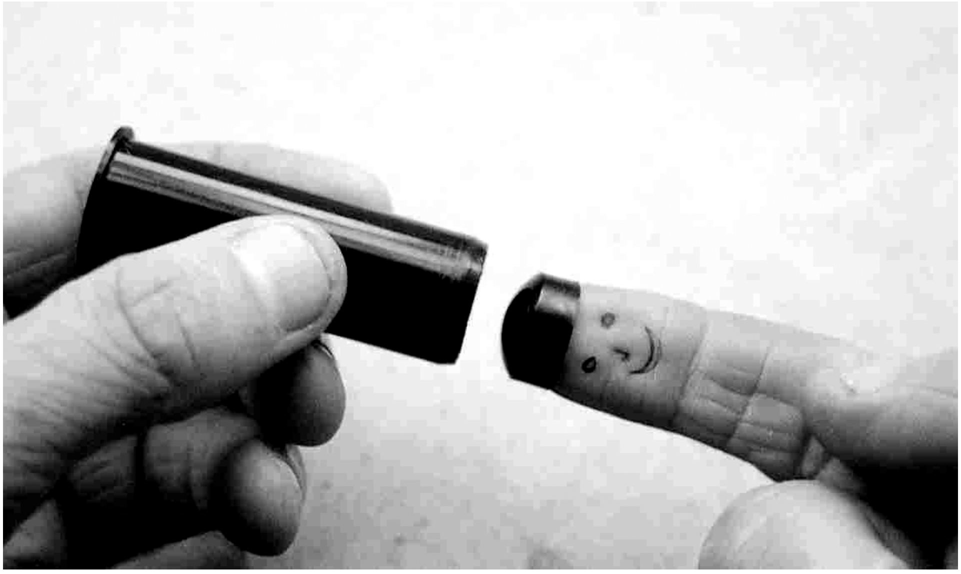
Push the assembly into the shell.

Apply retainer to the blank assembly olives and press into the shell. It should be noted that the assembly is a close press fit.



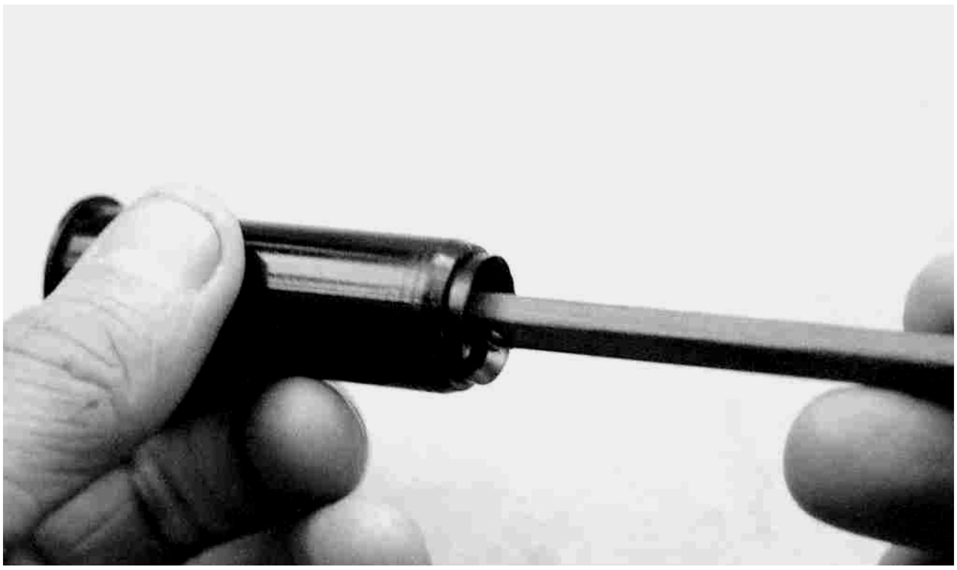
The primed shell

The base of the shell showing the assembly in position, effectively priming the shell ready for loading. Ensure the assembly is completely 'flush' with the end of the shell base.



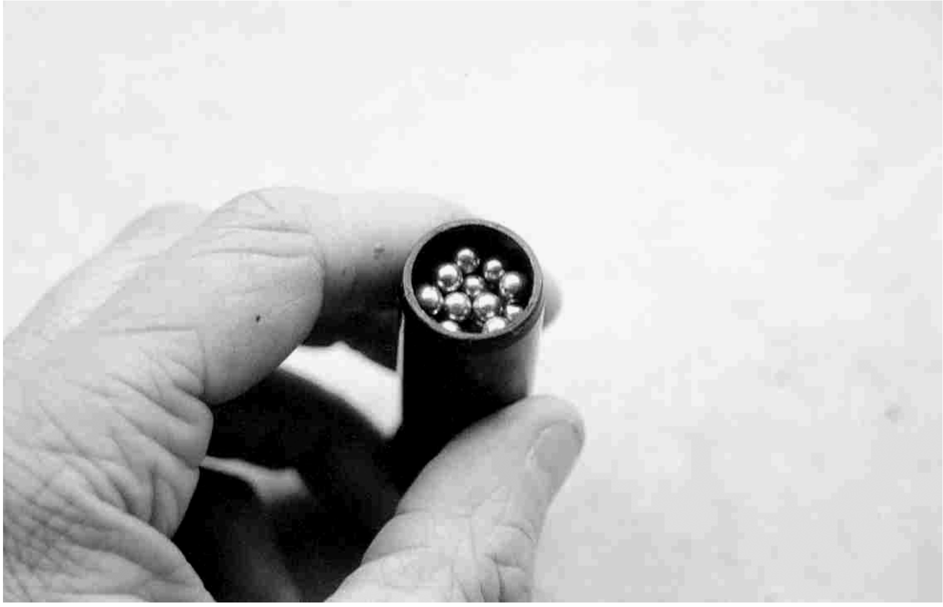
Insert the cap.

The improvised 12g shell should be charged with a suitable charge of propellant. Either black or smokeless powder may be used. If black powder cannot be obtained through conventional sources it can be sourced by dismantling 12g black powder cartridges such as 'yachting' or 'alarm' blanks etc. When using black powder, fill the shell to roughly the half way point leaving enough room for the shot charge. If smokeless powder is used place two or three nut caps over the charge.
After loading the powder charge an 8mm rubber nut cap is pressed into the shell using the finger, as shown in the above photo. Obviously this should be done with the shell in a *vertical* upright position and not as I am showing it in the above photo. Now press the nut cap fully home using a pencil. Tamp it down onto the powder charge. The nut cap will be a close press fit inside the shell.



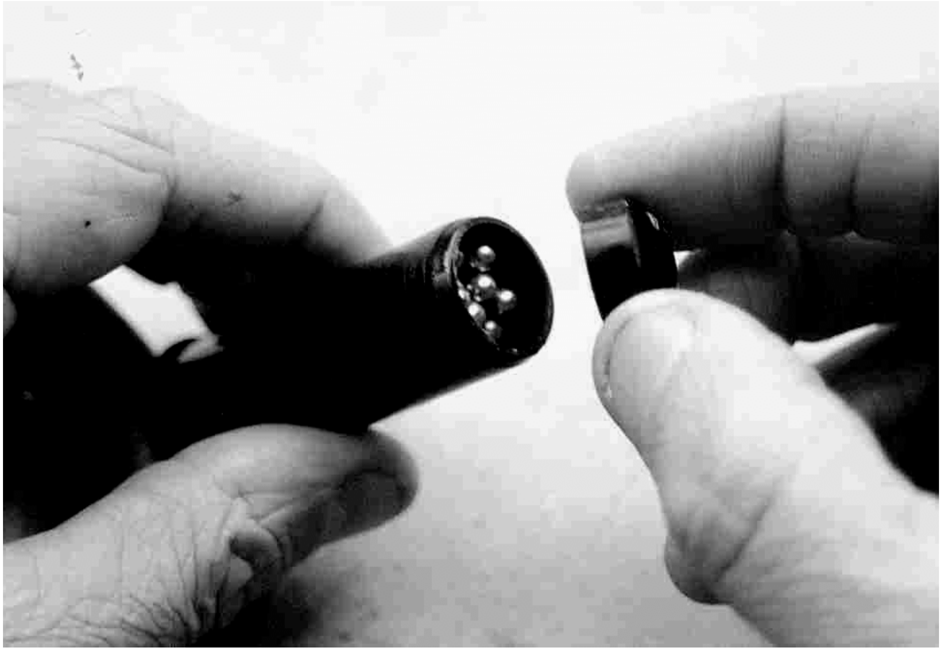
Press the cap home using a pencil.

LOADING THE SHOT



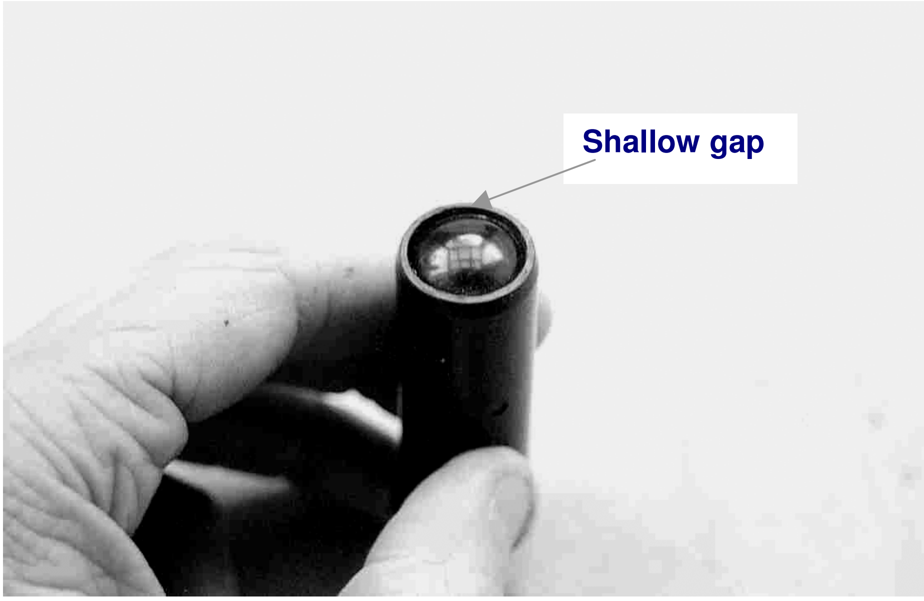
Load the shot.

After pressing the nut cap firmly into place, load a charge of lead shot (or steel BB's) into the mouth of the shell until the top of the load is just below the shell mouth. I loaded a charge of fifty five or so steel BB's. Now insert another nut cap (*open end into the case*) and press in firmly.



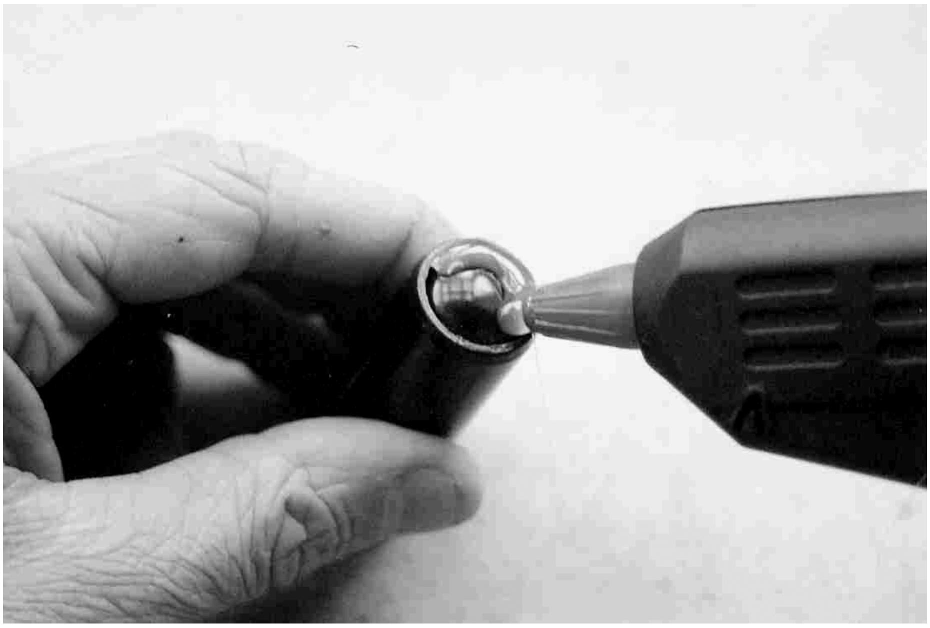
Insert nose cap.

If necessary, adjust the amount of shot to allow the cap to be inserted to the correct depth.

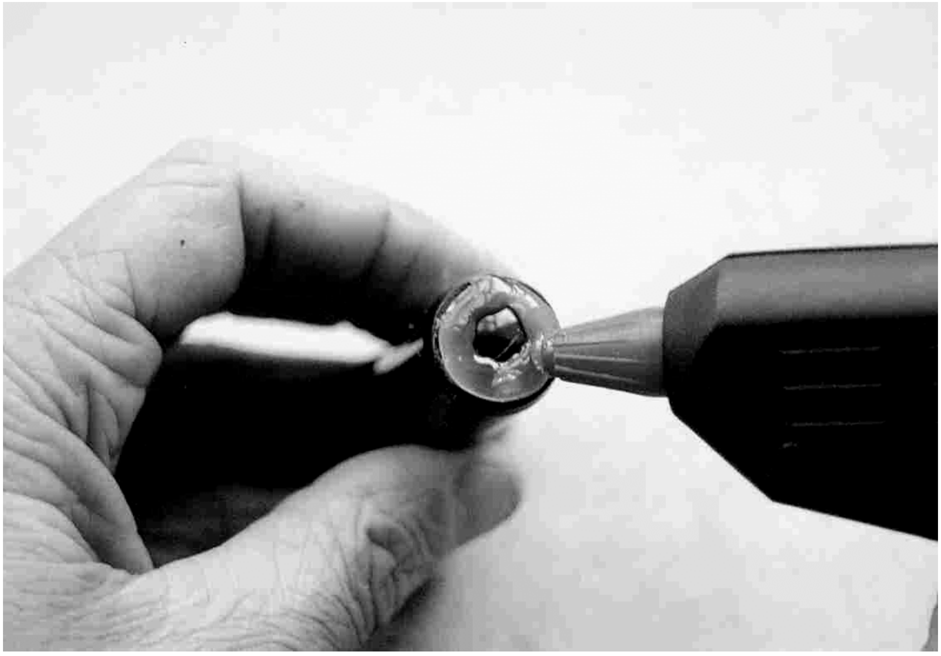


Cap in position.

The nut cap in position, effectively sealing the mouth of the shell and holding the shot charge in place. A bit of experimentation should be carried out by the loader as to how much shot is needed to allow the cap to be fitted correctly. As shown above, a shallow 'V' shaped gap should exist around the cap after fitting.
To finish off our improvised 12g shell it is only necessary to glue the cap in position using a hot glue gun. The one I am using here cost a mere £2.99. It is perfectly adequate for the job. Ensure the gun is fully heated and place a bead of glue around the mouth of the shell.

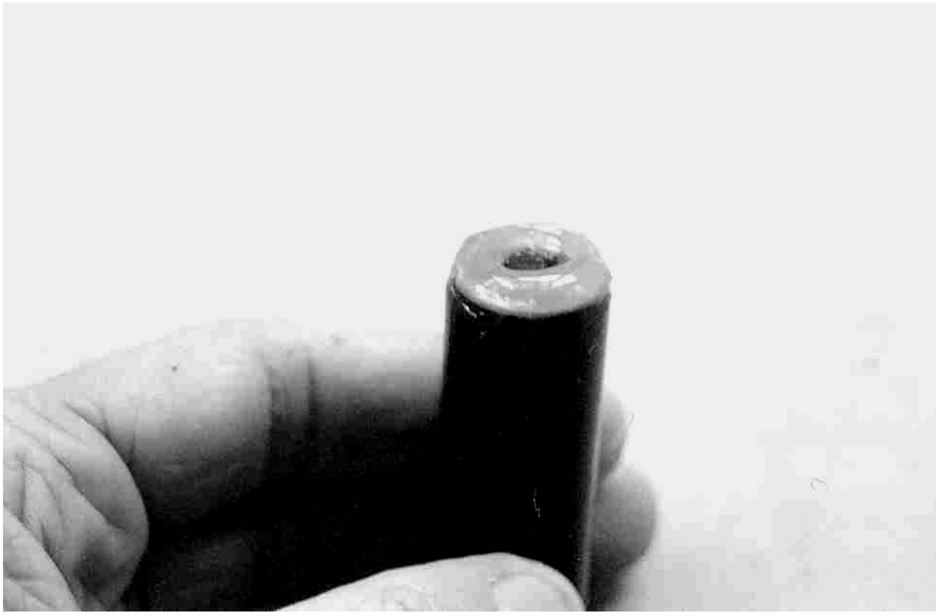


Applying the glue.



Finish with a neat bead of glue

When applying the glue it is far easier *to rotate the shell* in the fingers, rather than trying to move the gun around the shell mouth!



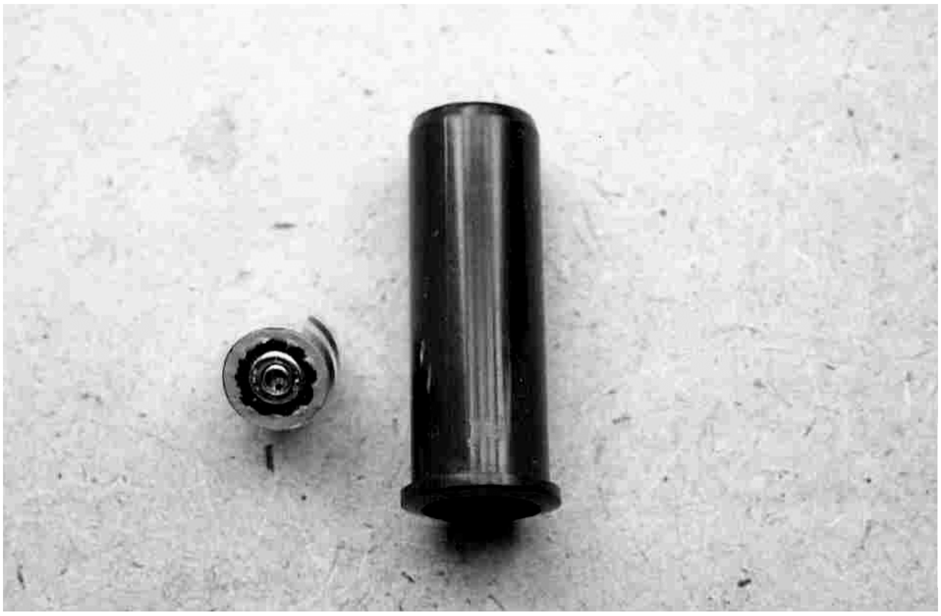
It should look similar to this when finished

The shell mouth is now completely sealed, as shown above.
The glue acts as the crimp found on any factory or professionally home loaded shotgun shell.
The finished 12g shell compares favourably to those commercially available.

An alternative priming method is to use a 13 or 14mm length of the red rubber 'Calor Gas' bottle tubing, available in most DIY/Caravan accessory stores, and an 8mm blank. The powder is removed from the blank just as we did with our .38 blank cartridge.
The gas tube is pressed into the olives and the blank is then pressed into the tube. All the components are retained using high strength retainer as discussed earlier.



Gas tube and 8mm blank assembly.



Primer assembly ready to fit to the case.

Once the tube and blank components are assembled the priming unit can be pressed into the base of the shell as per the 12g assembly.

THE AUTHORS IMPROVISED SHOTGUN SHELLS



Here are two of the authors improvised shotgun shells. The one on the left is a .410 shell manufacture from a length of brass tubing.
A circlip is used as the .410 cartridge rim. *See .410 shotgun shells, page 16.* **The improvised 12 gauge shell will function in any single or double barrelled shotgun as well as in some pump actions.**
It is important to check however that the rim of the shell has been reduced to the correct thickness/diameter prior to priming and loading the cartridge.

Improvised Propellant



The best type of propellant for any cartridge is obviously the kind manufactured for the purpose, but if this is not available we must improvise.
The simplest of all improvised propellant is the common match head.
I have used both 'safety' and 'standard' *whole* match heads to quiet good effect. A sharp knife is used to 'nip' the heads off 25 – 30 match heads for the .410 gauge and 40 – 45 heads for the 12 gauge.
This procedure can be quiet reliable as an improvised main charge, especially if the black powder we removed from the blank is loaded into the shell *before* the match head charge. This procedure will aid combustion of the main charge. It should be ensured that the black powder falls into the .38 blank case and the match head charge deposited over it.
Another reliable method is to 'shave' the match head material from the stem of the matches and ''powder" (crush) them. This is more time consuming however, especially when large amounts of propellant are required, but reliability of combustion is significantly improved.
The loading procedure is then just as easy as loading the match head charge, followed by the wads and shot.

Note: **The use of match head propellant is not an exact science and velocities can vary due to several factors such as type of matches used and the care with which the round was assembled etc. However, provided the shell is assembled with sufficient care there is no reason why they will not prove a reasonably reliable alternative to commercially available shotgun cartridges.**

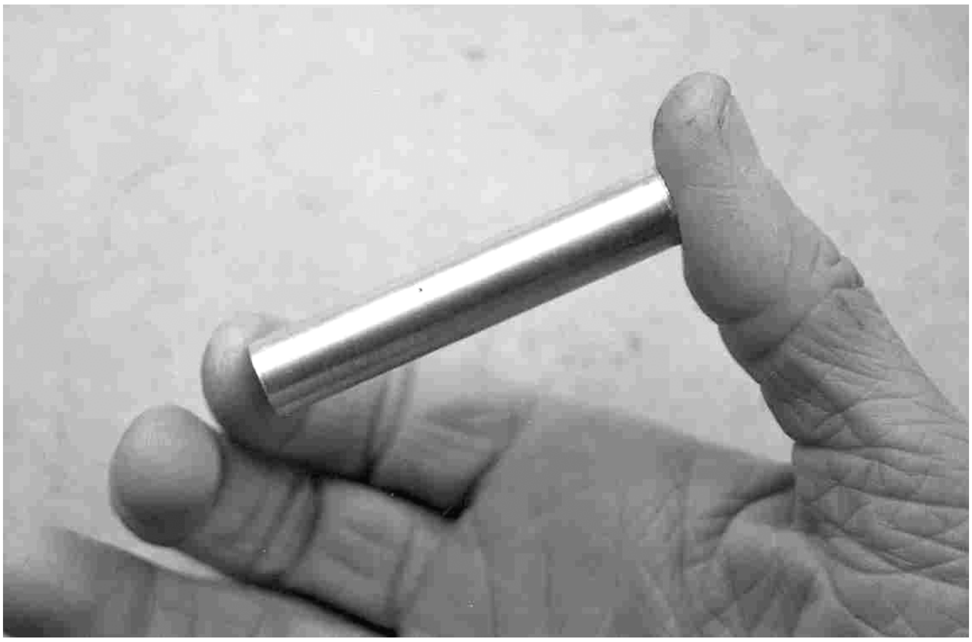
IMPROVISED HOMEMADE .410 SHOTGUN SHELLS

If, for whatever reason, you cannot buy your .410g shells from a store, you may need to construct your own improvised .410 ammunition.
The following document illustrates how .410 shells can be easily and quickly constructed with just a few simple tools and components.

Products required

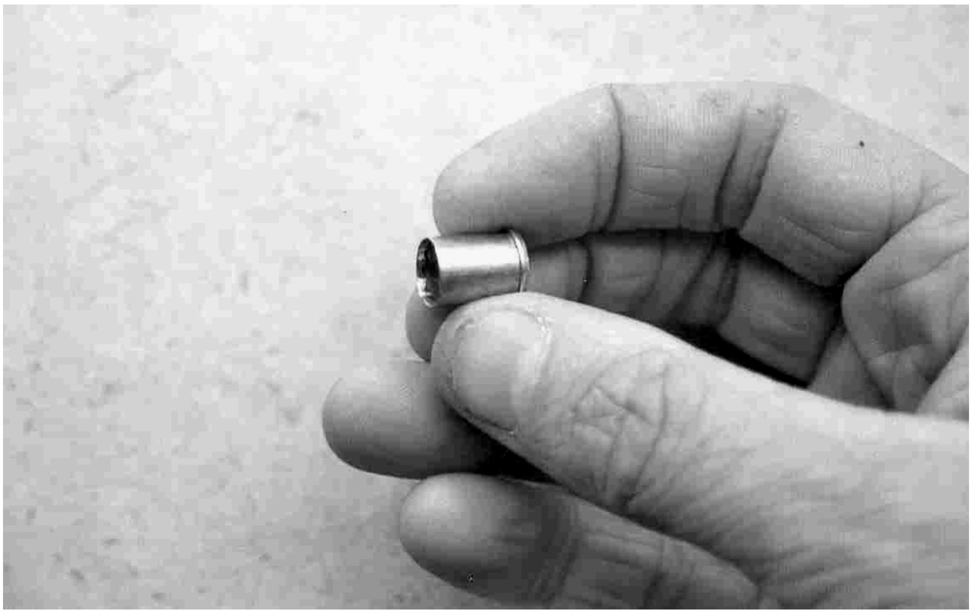
1) **15/32" (11.9mm) brass tube.**
2) **13/32" & 7/16" brass tube.**
3) **.38 blank cartridge.**
4) **4mm thick cork sheet.**
5) **Lead shot or BB's.**
6) **Hot glue gun.**





Cut the tube to the correct length.

The first step in constructing these improvised .410 shotgun shells is to purchase some lengths of brass tubing. This material is commonly available from most good hobby and craft shops.
We require three lengths of tubing; 15/32" from which to construct the shell (a 2 ¼" length is required) and some 13/32" and 7/16" for the priming assembly.
Cut a 2 ¼" length of the 15/32" tube using a plumbers tube cutter.



A .38 blank is used to prime the shell.

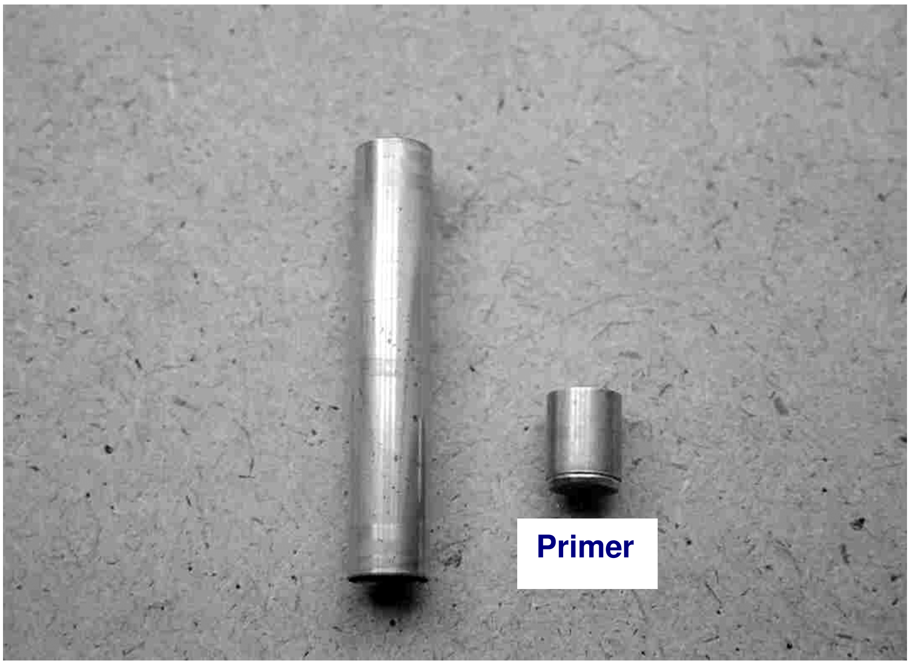
To prime the shell we require a .38 blank cartridge (as shown above) with the crimp and powder removed. The crimp should be filed away and the powder removed and discarded.



The blank and two tubes ready for assembly into the shell tube.

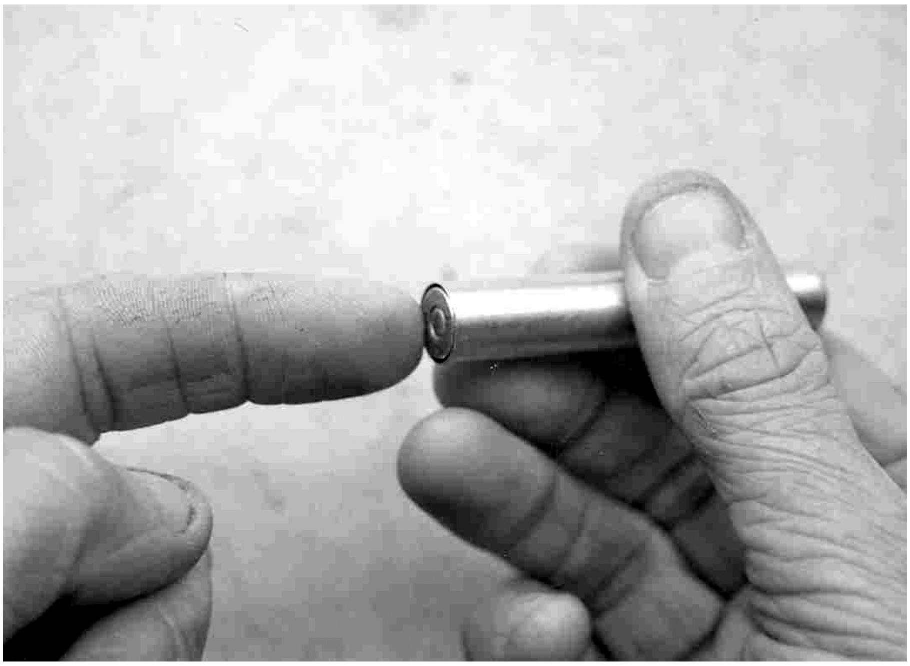
To prime the shell using the modified .38 blank we require two lengths of brass tube –13/32" & 7/16". The two tubes are 13mm (½") in length. Coat the outer surface of the blank with a high strength retainer such as bearing adhesive and press the blank into the 13/32" tube.
Allow the adhesive to harden for a few minutes.
Now coat the outer wall of the 13/32" tube with retainer and press this into the 7/16" tube. Allow several minutes for the retainer to harden.

PRIMING THE SHELL



The shell and priming assembly.

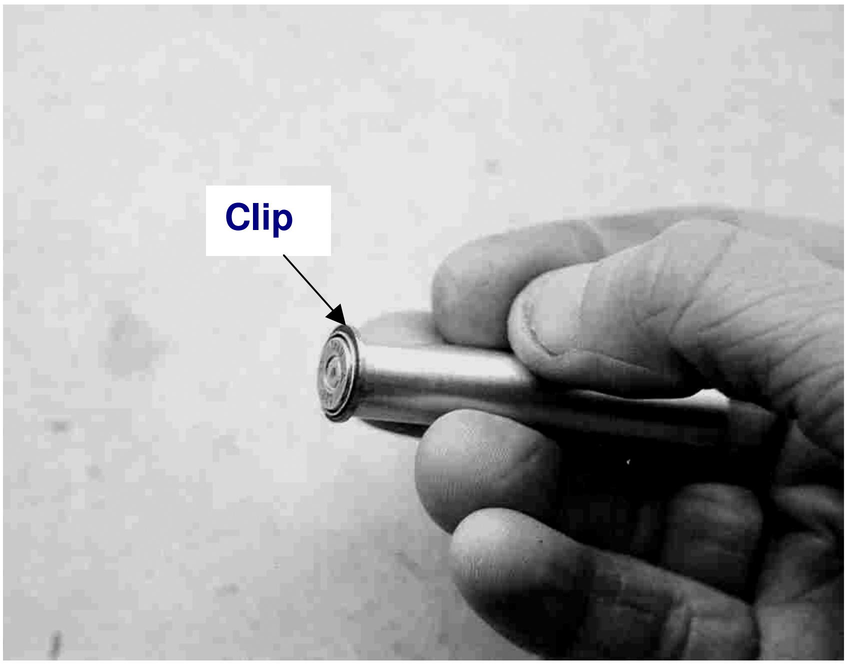
The priming assembly is now ready to insert into the end of the shell body. Simply apply retainer to the outer surface of the priming assembly and press it into the shell.



The primer should be flush with the end of the shell.

Ensure that the primer is fully flush with the end of the shell.

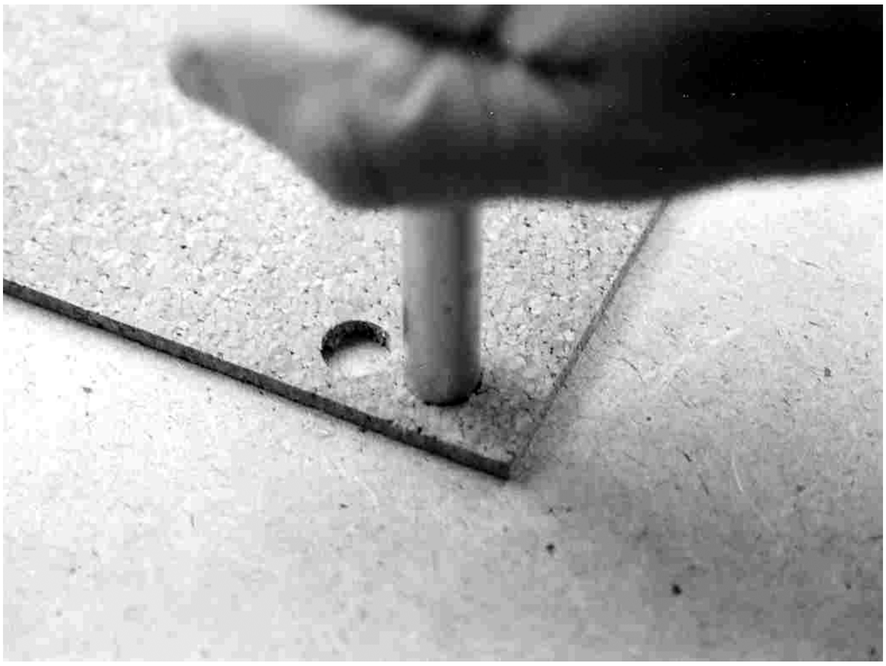
FITTING THE RIM



Fit the cir- clip to the shell base.

The rim of the improvised .410 shell is a simple 15/32" (12mm) Circlip. The clip is fitted to the end of the tube as illustrated above. It may be secured using retainer or soldered in position with either conventional solder wire or solder paint. However, if solder is used the clip must be fitted *__BEFOR__ the priming assembly is installed, for obvious reasons!*
The clip must then be trimmed, using a file, to remove the two plier holes present on the clips open end. At this point it is also necessary to check how much trimming the clip requires to allow it to chamber in your particular shotgun. It is useful to have a standard .410 shell handy as a guide by which to compare your improvised shell.
Care must be taken to ensure the clip is fitted securely and correctly.

CHARGING THE SHELL



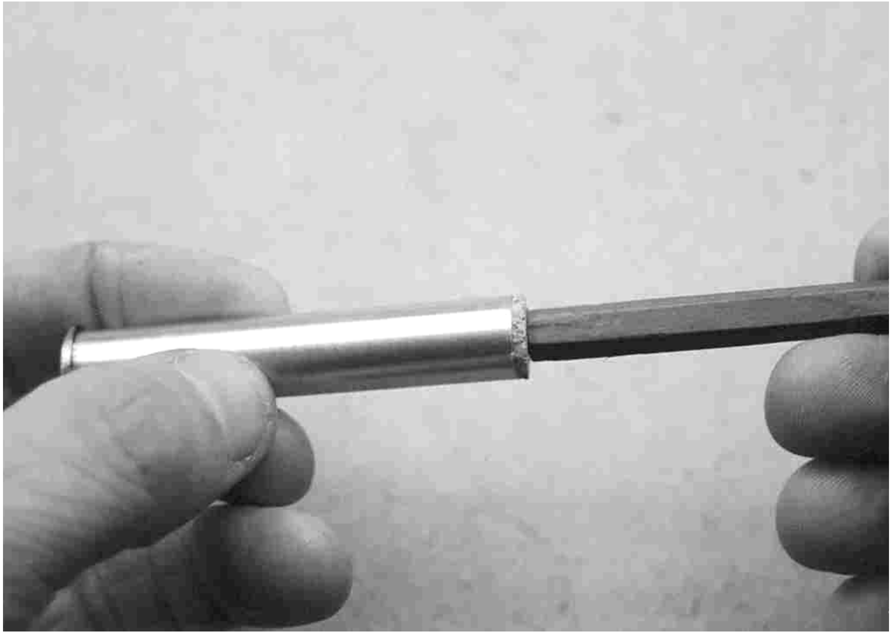
Press the tube into the cork to create two 'over powder' wads.

The next procedure is to make two small wads to retain the powder charge. For this we need a sheet of 4mm thick cork sheet. This material is widely available from most good hobby and craft shops.
Using the open end of the shell, or a separate length of the 15/32" shell tubing, press the end of the tube into the cork sheet. This should be done twice.



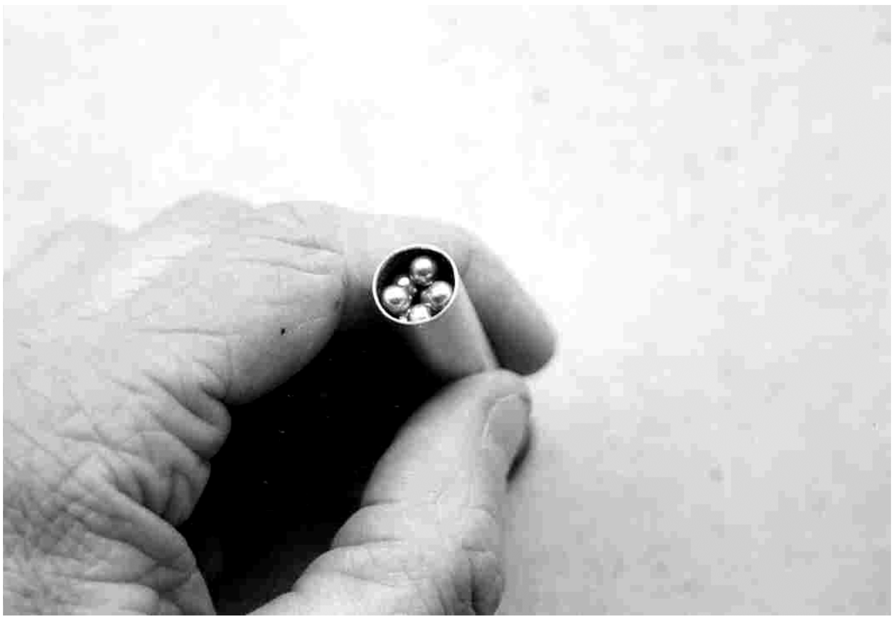
Remove the wads using a pencil.

Now remove the two cork wads using a pencil.



Insert the wads over the charge.

The shell is now ready to charge with powder. Either black or smokeless may be used, but if using a smokeless charge, make sure you adhere fully to the recommended charge spelt out in your reloading manual for the particular type of powder you are using. If black powder is used the shell should be filled to a third of it's length, or thereabouts.
After charging the shell press the two wads into the shell as shown above and tamp them firmly down over the powder charge.



Loading the shot.

Now charge the shell with your lead shot or steel shot. Ensure the top of the charge is just below the shell mouth.

CRIMPING THE SHELL MOUTH



Apply the glue to the shell mouth.

Using a hot glue gun, fill the end on the shell mouth with glue. *It is important to ‘’score’’ the inner wall of the shell mouth using a sharp nail, or similar object, in order to provide a ‘key’ for the glue to stick to*. The glue will effectively seal the shell and apply a crimp at the same time.



Leave the shell for several minutes for the glue to set.

The glue should fill the end of the shell mouth, as shown above.



The finished handmade .410 shell compares favourably to any commercially available .410 shotgun round.



The complete .410 shells are ready to shoot.

… "The judge he felt kind of sore. He said he reckoned a body could reform the ole man with a shotgun maybe, but he didn't know no other way".

The constriction of improvised ammunition can be dangerous. This document is a visual commentary of my own ammunition experiments only and does not condone or encourage the manufacture of ammunition by any individual.
The information contained in this publication is, therefore, presented for amusement, educational and academic study purposes only.